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IN THE

Supreme Court of the United States

OCTOBER TERM, 1995

EXXON CHEMICAL PATENTS, INC.,
EXXON CORPORATION, AND
EXXON RESEARCH AND ENGINEERING CO.,

Petitioners,

v.

LUBRIZOL CORPORATION,

Respondent.

Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

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PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. Whether the court of appeals erred in holding, contrary to the law upon which many thousands of patents are based, that patents for chemical composition products cannot be claimed solely by identifying the ingredients used to make the composition?

2. Whether the court of appeals erred in directing entry of judgment for respondent on a theory that was never argued in district court or on appeal, instead of remanding the case to give petitioners the opportunity to show that they had proved or could prove infringement under the appellate court's unanticipated construction of the patent claims?

PARTIES TO THE PROCEEDING

Petitioners Exxon Chemical Patents, Inc., Exxon Corporation, and Exxon Research and Engineering Co., and Respondent Lubrizol Corporation, are the only parties to this proceeding.[1]

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[1] The listing of parent corporations and subsidiaries required by Rule 29.6 is at App. 95a-108a.

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PETITION FOR A WRIT OF CERTIORARI

Petitioners, Exxon Chemical Patents, Inc., Exxon Corporation, and Exxon Research and Engineering Co. (hereafter collectively "Exxon") ask this Court to grant a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit.

OPINIONS BELOW

The opinions of the panel of the court of appeals, Appendix ("App.") 1a-37a, are reported at 64 F.3d 1553. The opinions of the court of appeals denying Exxon's petition for rehearing and suggestion for rehearing en banc, App. 68a-84a,

are reported at 77 F.3d 450. The final judgment and order of the United States District Court for the Southern District of Texas, App. 42a-45a, is not reported.

JURISDICTION

The judgment of the court of appeals was entered on September 1, 1995. A timely petition for rehearing and a suggestion for rehearing en banc was filed by Exxon on September 29, 1995, and was denied on February 23, 1996. App. 68a-69a. This Court's jurisdiction is invoked under 28 U.S.C. § 1254(1).

FEDERAL RULE INVOLVED

Federal Rule of Civil Procedure 50, at issue as to Question 2, provides in part:

> **(a) Judgment as a Matter of Law.**
>
> (1) If during a trial by jury a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue, the court may determine the issue against that party and may grant a motion for judgment as a matter of law against that party with respect to a claim or defense that cannot under the controlling law be maintained or defeated without a favorable finding on that issue.
>
> (2) Motions for judgment as a matter of law may be made at any time before submission of the case to the jury. Such a motion shall specify the judgment sought and the law and the facts on which the moving party is entitled to the judgment.
>
> **(b) Renewing Motion for Judgment After Trial; Alternative Motion for New Trial.** If, for any reason, the court does not grant a motion for judgment as a matter of law made at the close of all

the evidence, the court is considered to have submitted the action to the jury subject to the court's later deciding the legal questions raised by the motion. The movant may renew its request for judgment as a matter of law by filing a motion no later than 10 days after entry of judgment — and may alternatively request a new trial or join a motion for a new trial under Rule 59. In ruling on a renewed motion, the court may:

(1) if a verdict was returned:
  (A) allow the judgment to stand,
  (B) order a new trial, or
  (C) direct entry of judgment as a matter of law; or
(2) if no verdict was returned;
  (A) order a new trial, or
  (B) direct entry of judgment as a matter of law.

STATEMENT OF THE CASE

The Federal Circuit in this case held that proof of infringement of a patent which claims a chemical composition by listing its ingredients requires more than a showing that the alleged infringer has used precisely those ingredients to make a competing product. The Federal Circuit's decision, if not reviewed by this Court, could render valueless many thousands of patents on chemical compositions that have been issued by the Patent and Trademark Office.

1. Exxon's Invention.

In the mid-1970s, Exxon determined that the control of oxidation in motor oils (which enhances corrosion of engine parts) would be increasingly important, because new, smaller engines would work harder and become hotter. (A296-97;

A304-07; A314-15).[1] In a breakthrough 1977 experiment, Exxon discovered that, contrary to conventional wisdom, copper when added to motor oil compositions produced "outstanding" antioxidant effects. (A544-47; A882-83). After extensive testing and field trials, Exxon applied in 1979 and 1980 for patents on its invention in the United Kingdom ("U.K."), Europe, the United States, and elsewhere. (A10758-66; A2526). Exxon began to market such motor oils in 1980 (A559-60; A10768-69), and was soon using copper in virtually all of its U.S. automobile motor oils (A441-42; A696; A1735-36). Exxon's invention "exceeded all . . . expectations" and was "far superior on a cost/potency basis" to the previous antioxidants used in such motor oils. (A562; A10755-57).

On September 19, 1989, U.S. Patent 4,867,890 (the "'890 patent") issued to Exxon. Claim 1 defines a composition in terms of its ingredients: (a) lubricating oil; specified amounts of (b) an ashless dispersant, (c) an oil-soluble compound containing zinc to inhibit engine-wear (ZDDP), and (d) an oil-soluble copper compound; and (e) a magnesium or calcium salt detergent. *See* App. 18a-20a; *see also id.* at 5a-6a (summarizing claims).

2. Lubrizol's Infringement.

In 1981, Lubrizol's director of research learned of Exxon's invention from its U.K. patent application and ordered his researchers to determine whether copper in fact had antioxidant effects. (A752-58; A1936-37; A10792-94). On July 2, 1982, Lubrizol researchers circulated a memorandum stating that "[t]he goal of Lubrizol copper work was to exploit the use of oil soluble copper oxidation inhibitors as described in an Exxon patent application." (A776; *see also* A1408-15).

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[1] Citations are to the record Appendix filed in the Court of Appeals.

Over the next four years, Lubrizol's evaluation of copper additives, like Exxon's prior research, led Lubrizol to conclude that copper was the "most effective" oxidation inhibitor in motor oils. (A11122; A789-90). In late 1988, Lubrizol recognized that Exxon "[c]ould hit us in USA" with an infringement suit. (A11253). While Lubrizol considered removal of copper due to anticipated "patent troubles" from Exxon, it ultimately decided to proceed with its "fingers crossed." (A11255; A1853-54). Lubrizol's sales of automobile motor oils made with a copper ingredient rose to over $100 million in 1992. (A1347; A1444-45; A11256). By the time of trial, it had sold over $300 million of these products. (A11256).

District Court Proceedings

On the day that its patent was issued, Exxon filed a complaint alleging patent infringement against Lubrizol in the United States District Court for the Southern District of Texas. (A7555-58). Discovery lasted more than three years, entailing 110 depositions, millions of pages of document discovery, and other voluminous written discovery.

Lubrizol did not dispute that its accused products were made by using the precise ingredients in the amounts specified by Exxon's patent. Instead, its primary defense at trial was that the ingredients listed in Exxon's claims did not refer to the ingredients that were put "into the pot" to create the motor oil composition, but instead described the substances as they later existed within such a composition. Thus, the decisive question at trial was whether Exxon's patent claimed a composition made from the combination of stated ingredients in their specified amounts or whether, as Lubrizol asserted, Exxon's patent claimed a motor oil composition in which

could be found each of the five substances listed in Exxon's patent.[2]

Exxon's support for its view as to the construction of its patent turned upon the claims and specification in the patent itself, the "prosecution history" of the patent claims at the United States Patent and Trademark Office, and testimony by persons skilled in the relevant art as to how they would interpret Exxon's claims. That testimony was summarized in the dissenting opinion of Judge Nies:

An Exxon employee who helped prosecute the applications testified that, based on his examination of "probably literally thousands of lubricant patents over the years," Exxon's patent claim specifying ingredients used to make the composition was "like a standard format for a composition." App. 31a. As he explained, "it is sort of like baking a cake. You mix them [the stated ingredients] together." *Id.* Lubrizol's own employees confirmed this interpretation. Mr. Pindar — described by Judge Nies as "a scientific advisor to Lubrizol, read[ing] the claims as a person of skill in the art" (*id.*) — determined whether Lubrizol's product infringed the European counterpart of Exxon's patent "by comparing the starting ingredients, not the final or intermediate products." *Id.* Similarly, Dr. Salomon, who also worked for Lubrizol, testified "that her concern as a [lubricant] formulator is 'what goes in[to] the pot.'" *Id.*

At the close of Exxon's direct case and again after all of the evidence was admitted, Lubrizol filed motions for a judgment as a matter of law ("JMOL") under Fed. R. Civ. P. 50, arguing that Exxon had not proved infringement because it had not established that the substances listed by Exxon as

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[2] Specifically, Lubrizol contended that, although it put the "ashless dispersant" described in Exxon's patent "into the pot," once there it became "non-ashless" because it formed an association or "complexed" with the zinc compound, ZDDP.

ingredients could be found in their described form and amounts in the final product at the end of the manufacturing process. The trial judge denied Lubrizol's motions. Agreeing with Exxon, he instructed the jury that Exxon's patent "claims cover the ingredients which go into the composition." App. 7a.

So instructed, the jury returned a verdict for Exxon which concluded that Lubrizol had willfully infringed Exxon's patent. In a subsequent phase of the case, another jury fixed Exxon's damages at $48 million — which were doubled under 35 U.S.C. § 284, because of the willful nature of Lubrizol's infringement and its obstructive conduct — with prejudgment interest of $8.7 million. App. 59a-67a. The District Court also awarded Exxon $23.7 million in attorneys' fees and costs based on 35 U.S.C. § 285 (prevailing party fee award) and 28 U.S.C. § 1927 (vexatious litigation fee award), after concluding, *inter alia*, that "Lubrizol [had] acted in bad faith throughout [the] entire litigation." App. 43a; *see also id.* at 58a, 64a.

Proceedings in the Federal Circuit

Lubrizol's appeal to the Federal Circuit pursued the arguments that it made below, contending that the substances listed in Exxon's patent claims must be found in the final products in the form and amounts recited in the patent. On September 1, 1995, the Court issued the opinion and judgment that is the subject of this petition.

The panel majority construed Exxon's patent claims by briefly discussing the language of the patent claims and specification, as well as the patent's prosecution history, *id.* at 2a, 7a-8a, while ignoring the evidence presented at trial describing how Exxon's patent was like "thousands" of others which simply listed the ingredients that were used to make a composition. In this fashion, the panel majority rejected Exxon's argument that its claims covered "whatever product results from the use of the . . . ingredients." *Id.* at 8a.

However, the lower court also rejected Lubrizol's contention that the Exxon patent claimed only an end product in which all of the substances listed as ingredients could be found in the same form and amounts specified in the patent claims. *Id.* at 8a-9a. In the panel majority's view, Lubrizol would infringe if, "at any time" during the manufacturing process, the ingredients listed in Exxon's patent were present in the form and amounts specified in the patent. *Id.* at 9a.

The panel majority recognized that Lubrizol's interpretation was "too narrow," *id.* at 9a, and "less generous to Exxon," *id.* at 17a, n.6, than the court's "broader" interpretation, *id.* at 9a. However, Exxon was not given an opportunity to take advantage of that more "generous" or "broader" approach to proving infringement. Instead of remanding the case to the district court for further proceedings in the light of the Federal Circuit's newly-minted claim construction, the court awarded Lubrizol judgment as a matter of law.

Judge Nies dissented as to both aspects of the decision below. Based on her own reading of the patent claims, specification, and prosecution history, as well as the expert testimony, she concluded that the trial court had correctly adopted Exxon's view of its claims as a statement of "required five ingredients . . . regardless of any unknown reactions or metal complexes" after they were mixed together. *Id.* at 26a. She emphasized that her "concern" was "not merely [with] this case," but rather with the majority's "technical rules for how chemical compositions must be claimed." *Id.* at 23a.

Judge Nies also disagreed with what she termed "the majority's . . . extraordinary disposition" of the case in directing judgment for Lubrizol. *Id.* at 33a. Describing "[t]he majority decision [as] com[ing] out of the blue," she stated that "Exxon cannot conceivably have waived the issue of

infringement under the majority's broader claim construction." *Id.* at 36a-37a.

Rehearing in the Federal Circuit

Exxon filed a timely petition for rehearing and a suggestion for rehearing en banc, which the court of appeals denied on February 23, 1996. That action prompted three separate opinions.

Judge Newman dissented on the ground that "[t]he panel majority's new rule of 'claim construction' will cast a cloud upon many thousands of existing patents," cause a "serious disruption of chemical patent-dependent activity," and impose a "massive taint upon existing property rights." App. 71a, 74a. She recognized that Exxon had used a "standard way of claiming chemical compositions . . . by their ingredients":

> Naming the chemicals and their amount is the clearest, most accurate, and most comprehensive way of describing such inventions. Often there is no other way of describing chemical compositions . . . . It is not necessary to know what physical or chemical interactions occur in the container in order to describe this invention, which resides in the combination of listed ingredients.

Id. at 74a-75a. Judge Newman supported her views with two leading treatises on patent claim drafting (*id.* at 75a, 77a), a survey of the format used in numerous patent claims issued by the Patent and Trademark Office in just a single week (*id.* at 77a-78a), and the expert testimony from both sides in the case (*id.* at 76a n.2, 78a-81a).[3]

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[3] Like Judge Nies, Judge Newman also disagreed with the panel's refusal to remand the case to allow Exxon to present evidence or argument relevant to the panel's construction of Exxon's claim. App. 75a-77a.

Judge Mayer concurred, but did not take issue with Judge Newman's view of the case. And, like Judge Nies, he recognized that the panel majority's construction of the claims had come "out of the blue": "Two judges have divined an interpretation of the claim that occurred to no one else in this extensive litigation. None of the parties or the trial court offered the interpretation that these two judges chose, and none of the extensive evidence about how those skilled in the art would understand the claim supports it." App. 70a.

Judges Clevenger and Plager, the two members of the panel majority, did not dispute Judge Newman's view of the implications of their opinion as to how patents for chemical compositions must be drafted. They recognized that Judge Newman's opinion reduced to "a simple proposition" that Exxon's patent claims cover the product that "results from mixing the ingredients named in the formula" and that, under such a view of the law, "Exxon would have won on its proofs in this case." App. 70a. They, however, disagreed with Judge Newman on that "simple proposition." They adhered to the view that to prove infringement of chemical composition claims, as the Federal Circuit now interprets them, Exxon had to prove that Lubrizol composition "contains the specified ingredients at any time from the moment at which the ingredients are mixed together."[4] App. 9a; *see* App. 70a-71a.

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[4] The two members of the panel majority also asserted that the "basic claim interpretation theory adopted by the court was put forth by Lubrizol in its defense to Exxon's suit." App. 71a. However, the panel majority did not attempt to reconcile this assertion with its earlier description of its construction of the claim as being "broader" and more "generous" than Lubrizol's.

REASONS FOR GRANTING THE WRIT

I. The Federal Circuit's Ruling Undermines Established Law, Upon Which Thousands of Existing Patents Are Based, That Allows Composition Of Matter Products To Be Claimed Solely By Listing Ingredients.

A. The Federal Circuit's Decision Is Inconsistent With Established Patent Law.

Exxon claimed a new and very valuable composition of matter by describing the specific ingredients in the specific amounts that are used to make the composition. The claims of Exxon's patent were drafted in a standard format used in "[m]any thousands of chemical patents." App. 72a (Newman, J., dissenting from denial of en banc rehearing). Prior to the Federal Circuit's decision, this format for claiming a composition had consistently been sanctioned by the federal courts, patent treatises, and the Patent and Trademark Office ("PTO").

The Federal Circuit repeatedly recognized that Exxon had claimed its new composition in terms of "specific ingredients." *See, e.g.*, App. 2a, 4a, 7a, 9a. However, it interpreted Exxon's standard "ingredients-list" format as describing what the court below referred to as the "ingredients" existing within the composition, as opposed to the ingredients that go into the composition. *See id.* 8a, 10a, 13a. The decision below — left standing by the Federal Circuit en banc over a dissent that described its sweeping consequences — abruptly changes the requirements for claiming compositions of matter and undermines many thousands of existing patents.

In *Holland Furniture Co. v. Perkins Glue Co.*, 277 U.S. 245 (1928), this Court defined the manner in which a patent should claim a composition of matter: A "patent, so far as it is a patent of a composition of matter, should contain some description of the *ingredients entering into the composition*

which would both define the invention, . . . and carry it beyond the previous development of the art." *Id.* at 254 (emphasis added; citations omitted). As the Court stressed, "[t]here can be no description of a composition of matter without some designation of its ingredients." *Id.* at 255. *Holland Furniture* is, of course, consistent with the most natural meaning of "ingredient" — *i.e.*, "something that *enters into* a compound." *Webster's Third New International Dictionary* 1162 (1968) (emphasis added).[5]

Holland Furniture also reflects the settled law recited in patent treatises, which for more than 100 years has formed the basis for drafting composition of matter patents. As Professor William Robinson explained in his classic treatise:

> [a] composition of matter is an instrument formed by the intermixture of *two or more ingredients*, and possessing properties which belong to none of these ingredients in their separate state. An ingredient is a substance which, though capable of independent existence, may yet so far *lose its identity and individuality*, when mingled with other substances, as no longer to be distinguishable from them.

1 William C. Robinson, *The Law of Patents for Useful Inventions* § 192, at 278 (1890) (hereinafter *Robinson on Patents*) (emphases added). As Robinson shows, *after* the moment at which the ingredients are mixed together, they may lose their separate identities, and it may be impossible to distinguish or to describe them separately. Thus, while inventors always know what ingredients go into forming a new

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[5] "Ingredient" derives from the Latin "ingredi," a verb meaning "to go into" or to "enter." *Webster's Third* at 1162. *See also* 1 *The Compact Edition of the Oxford English Dictionary* 1436 (1971) (noting ingredient derives from root "ingredi" which means "to enter").

composition of matter, they may not know precisely what happens to the ingredients after they are mixed together.[6]

Holland Furniture and the Robinson treatise were supported by lower court cases, holding that the "ingredients" of a composition of matter claim refer to ingredients as they enter into the composition, not as they might later exist within the composition. For example, in *Panzl v. Battle Island Paper Co.*, 138 F. 48, 53 (2d Cir. 1905), the Second Circuit upheld a composition of matter patent upon proof "that by compounding the ingredients in the proportions stated . . . a new and highly useful result is obtained." The lower court opinion in *Panzl* reveals that the claim was written in the traditional form that was used here. *See Panzl v. Battle Island Paper Co.*, 132 F. 607, 608 (N.D.N.Y. 1904) (claim 3 — 26% hydraulic cement, 12% chamotte, 21% quartz and a suitable quantity of diluted silicate of soda).[7] Moreover, as Lubrizol alleged was the case here, the ingredients listed in *Panzl* did

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[6] Robinson also shows how the Federal Circuit improperly conflated composition of matter patents with patents for other products where the parts or elements typically remain unchanged during the manufacturing process:

> [An ingredient in a composition of matter patent] differs from a part or element of a machine or manufacture which, however closely united with its associated parts or elements, always preserves its own identity, and is discernible in its independent as well as in its combined condition.

Robinson on Patents § 192 at 278.

[7] In *Chadeloid Chemical Co. v. Frank S. De Ronde Co.*, 146 F. 988, 989 (C.C.S.D.N.Y. 1906), the plaintiff's claims were similarly drafted ("four parts each of paraffin and currier's hard grease, eight parts benzol, and seven parts methyl alcohol"). The court held that the infringement was proved where "[t]he materials *used by the defendant in compounding* its product are practically similar to those of the composition in suit, and by their use the same product is created." *Id.* at 991-92 (emphasis added).

not retain their same form when combined. *See id.* at 610 (noting that, when combined, "the cement and the silicate of soda react upon each other, [and] there is formed mono calcium silicate and caustic soda"). Nonetheless, it was entirely proper to claim the composition by ingredients, and to say that the composition "contain[s]" those ingredients, *id.* at 613.[8]

The principles recited in *Holland Furniture*, the Robinson treatise, and the early cases have been universally accepted by patent practitioners and the courts. Modern patent treatises follow Robinson in recognizing that compositions of matter are properly understood as a combination of ingredients which do not necessarily maintain their own separate identity and individuality within the composition.[9] Furthermore, there appears to be no modern case in which a party has even argued — let alone where a court has suggested — the approach to claim construction that has now been adopted by the Federal

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[8] The panel majority bolstered its decision by noting that both the title of Exxon's patent and its specification refer to the composition of matter as "containing" the described ingredients, although that word is not used in the claims themselves. App. 7a-8a. The majority offered no support for this construction of the word "containing," and it obviously defies common usage — *e.g.*, an angel food cake "contains" egg whites, but only in the sense that they were one of the ingredients used in baking the cake.

[9] *See*, 1 Donald S. Chisum, *Patents* § 1.02[2], at 1-10 (1995) (quoting Robinson); 3 Ernest B. Lipscomb III, *Walker on Patents* § 11.8, at 328-29 (3d ed. 1985) (same); 3 Anthony W. Deller, *Patent Claims* § 463, at 39 (2d ed. 1971) (same). The leading text on patent claim drafting confirms that Exxon — like many thousands of other patent holders — properly claimed a new composition of matter simply by listing ingredients: "Composition of matter claims list the chemical ingredients (compounds, elements or radicals) making up the composition or compound." Robert C. Faber, *Landis on Mechanics of Patent Claim Drafting* § 49, at 148 (3d ed. 1990).

Circuit.[10] Certainly, the Federal Circuit cited no authority that calls into question the approach used by Exxon here.

History explains the traditional approach of claiming new compositions by listing ingredients: In the past, the only practical way of claiming compositions of matter was by listing the ingredients used in their manufacture. Even with today's modern technology, it is often very difficult or impossible to determine all of the substances inside a composition.

B. The Federal Circuit's Disregard Of The Testimony By Persons Skilled In The Art Regarding Their Understanding Of The Patent Demonstrates The Broad And Unqualified Nature Of Its Ruling.

The district judge entertained argument on claim construction and other jury instructions, after he had heard all of the evidence. At that time, he recognized that "these patents are directed . . . toward formulators" of lubricating oils, and he agreed that "there is no dispute how the formulators have read this patent." (A1973). Thus, an Exxon witness established that its patent claims were drafted in "a standard format for a composition" and disclosed "what is combined to make the

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[10] The few post-*Holland Furniture* cases which even discuss claims for compositions recognize that they may be claimed by their ingredients. *American Purifyne Co. v. Novedel Process Corp.*, 3 U.S.P.Q. 180, 185 (2d Cir. 1929) (a composition of matter is properly identified where "both ingredients of the mixture were known and the means of identifying them were known"); *American Chemical Paint Co. v. Firestone Steel Products Co.*, 117 F.2d 927, 930-31 (6th Cir. 1941) ("for compositions of matter . . . [i]nfringement depends upon the identity or equivalence of the ingredients"); *Application of Henderson*, 348 F.2d 550, 551 (C.C.P.A. 1965) (applying Robinson); *Application of Lindner*, 457 F.2d 506, 507 (C.C.P.A. 1972) (interpreting claims for a composition "comprising" substance (a) and substance (b) to be directed to a "composition of ingredients (a) and (b)").

product." App. 31a (Nies, J., dissenting; quoting A909). Dr. Salomon, Lubrizol's own lubricating oil formulator, confirmed this interpretation of the patent claims:

> THE COURT: You get a list of chemicals to put into something, that is what you do? The end result is somebody else's concern?
>
> THE WITNESS: You mean the end result of what happens in the pot?
>
> THE COURT: Yes.
>
> THE WITNESS: Well, what is my concern as a formulator is what goes into the pot, and realistically [what] is the performance result I get back after it is tested. Does this stuff work? . . .

(A1496-97).[11]

Accordingly, the district judge understood that lubricating oil formulators concern themselves with "what goes into the pot" and whether the composition so created works. (A1497). They do not try to describe chemically "the end result of what happens in the pot." (*Id.*)

In *Markman v. Westview Instruments, Inc.*, 64 U.S.L.W. 4263 (April 23, 1996), this Court recognized that patent claim construction often involves consideration of the testimony offered by persons skilled in the relevant art. *See, e.g., id.* at 4269 (stressing a judge's "trained ability to evaluate [such]

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[11] Other evidence demonstrated that another Lubrizol employee, Mr. Pindar, whom Judge Nies described as "a person of skill in the art" (App. 31a), analyzed the claims of Exxon's European patent precisely as Exxon contended at trial they should be understood. He compared Lubrizol's products to Exxon's patent by analyzing the ingredients used to make the products, and concluded that virtually many of Lubrizol's products infringed that patent. (A1848-51; A11296-308).

testimony in relation to the overall structure of the patent"). The Federal Circuit's refusal even to acknowledge the testimony that was evaluated by the district judge in this case shows that its new approach applies to all composition of matter claims that only identify ingredients, without regard to the record developed at trial.

C. The Decision Below Will Have A Significant Disruptive Effect Both On Thousands Of Existing Patents And On Practice At The PTO.

As Judge Newman concluded below, the decision in this case is "gravely incorrect . . . as a matter of law, as a matter of chemistry, and as a matter of patent practice" and is "contrary to the way that chemical formulation composition claims are understood within the chemical and the legal communities." App. 71a, 74a. The disruptive effect of this decision should lead the Court to grant certiorari.

First, as Judge Newman explained, the decision will potentially make unenforceable "[m]any thousands of chemical patents [that] are written in the simple combination style" used by Exxon in this case. *Id.* at 72a. She reviewed a single issue of the PTO's Official Gazette, which lists the claims from every patent issued during the prior week, and found approximately 100 composition of matter patents having claims drafted in the same form as Exxon drafted its claims. *See id.* at 77a-78a. Just a few examples of such patents, issued during that week, are reproduced at App. 85a-94a. Employing the standard "ingredient-list" format used in the Exxon patent, each of these patents claims a particular type of composition (*e.g.*, a "sealing composition," a "dessert composition," a "breast tumor vaccine," etc.) "comprising" listed ingredients in specified amounts. *Id.* at 85a, 91a, 93a. Under the decision below, all such patents are subject to being rendered valueless by the lower court's new test for determining infringement. (The Court could confirm the impact of the Federal Circuit's

decision on existing patents by requesting the views of the Solicitor General, who could present the expert views of the PTO.[12])

Second, the Federal Circuit's decision will disrupt established practice at the PTO and create new difficulties in evaluating patent claims. As Judges Plager, Nies, and Newman all recognized, under the Federal Circuit's ruling in this case an inventor, who knows the ingredients entering into a composition but may be unable to describe their state within the composition, will be forced to use "product-by-process claims" to secure patent protection. App. 21a (Plager, J., concurring); *see also id.* at 33a (Nies, J., dissenting) *id.* at 82a, n.3 (Newman, J., dissenting as to denial of *en banc* rehearing).[13]

However, the PTO has long disfavored product-by-process claims, considering them to be of a "peculiar nature" and unwieldy in the patent examination process because "the [PTO] is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." Manual of Patent Examining Procedure § 2113, at 2100-31 (PTO Sept. 1995) (internal quotations omitted). (Again, the Court could confirm the implications of the decision below with respect to the

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[12] Where federal agencies are given special roles under the statutory scheme, this Court frequently invites the Solicitor General to file an *amicus curiae* brief expressing the views of the government on certiorari petitions. *See, e.g., Novopharm, Inc. v. Burroughs Wellcome Co.*, 115 S. Ct. 2554 (1995) (patent case); *Bank One Chicago, N.A. v. Midwest Bank & Trust Co.*, 115 S. Ct. 1398 (1995) (banking case); *Asgrow Seed Co. v. Winterboer*, 114 S. Ct. 1535 (1994) (patent-related case under Plant Variety Protection Act).

[13] Of course, the availability of this approach in drafting new patents will not save the thousands of patents that have been drafted under the traditional approach.

PTO's award of future patents by requesting the views of the Solicitor General.)

Third, the decision below marks a major departure from the previously fundamental proposition that an inventor need not understand his invention in order to patent it. As this Court stated in *Eames v. Andrews*, 122 U.S. 40, 56 (1887), "[a]n inventor may be ignorant of the scientific principle, or he may think he knows it and yet be uncertain, or he may be confident as to what it is, and others may think differently. All this is immaterial, if by the specification the thing to be done is so set forth that it can be reproduced." *See also Diamond Rubber Co. v. Consolidated Rubber Tire Co.*, 220 U.S. 428, 435-36 (1911); *Newman v. Quigg*, 877 F.2d 1575, 1581 (Fed. Cir.), *modified on other grounds*, 886 F.2d 329 (Fed. Cir. 1989), *cert. denied* 495 U.S. 932 (1990); *Walker on Patents* § 10:15.

Under the Federal Circuit's new approach, this fundamental tenet of patent law no longer applies to thousands of composition of matter claims. Inventors who have disclosed the ingredients that are used to make new compositions will lose their patent protection to competitors (like Lubrizol) who read their patents and use precisely those ingredients to make competing products.

II. The Court Below Erred in Directing Entry Of Judgment Against Exxon On A Theory Never Advanced By Lubrizol.

In *Markman*, this Court held that there are two elements to a patent infringement case, "construing the patent and determining whether infringement occurred." 64 U.S.L.W. at 4267. It agreed with the Federal Circuit that the first is a question of law, to be determined by the court, and that the second is a question of fact to be submitted to a jury. But it reminded the courts that it is "essential to preserve the right to a jury's resolution of the ultimate dispute." *Id.* at 4265. In

this case Exxon was denied any opportunity to convince a jury that Lubrizol had infringed Exxon's patent as it has now been construed by the Federal Circuit.

Lubrizol's motions for JMOL under Rule 50 were based on the theory that Exxon was required to prove that Lubrizol's final products contain stated components in the requisite amounts. The court of appeals *agreed* that those motions were based on faulty legal analysis, terming Lubrizol's construction of Exxon's patent claims as only "partially correct" and being too "narrow" and "less generous" to Exxon than the court of appeals' "broader" construction.

As the panel majority stated, its construction, unlike Lubrizol's, was not limited to final products, but also included intermediate compositions during the manufacturing process. Thus, under the panel majority's approach, a new factual issue arose in the district court: whether any intermediate compositions that existed, as the ingredients were being mixed during Lubrizol's manufacturing process, contained ashless dispersant within the meaning of the patent claims as interpreted by the court of appeals. *See*, *supra*, p. 6, n.2. Exxon never had an opportunity to introduce evidence on that issue because it was not relevant under Exxon's theory that the patent claims listed ingredients used to make the composition nor on Lubrizol's theory that the patent claims listed substances as they exist in Lubrizol's final products. The award of judgment against Exxon without a remand conflicts with numerous cases interpreting Rule 50 as protecting a party's right to offer evidence to meet a new legal theory first articulated on appeal.

Under Rule 50(a), the district court may grant a motion for JMOL only if it is made "before submission of the case to the jury," and that motion "shall specify . . . the law and the facts on which the moving party is entitled to the judgment." Fed. R. Civ. P. 50(a)(2). Rule 50(a) thus affords the

nonmoving party "an opportunity to cure any deficiency in that party's proof that may have been overlooked until called to the party's attention by a late motion for judgment." Advisory Comm. Notes to 1991 Amendments (sixth paragraph, describing requirements of Rule 50(a)(2)). *See also* 9A Charles Alan Wright & Arthur R. Miller, *Federal Practice and Procedure* § 2533, at 309 (2d ed. 1995); *Quinn v. Southwest Wood Prods., Inc.*, 597 F.2d 1018, 1025 (5th Cir. 1979) (emphasis added):

> When a claimed deficiency in the evidence is called to the attention of the trial judge and of counsel before the jury has commenced deliberations, counsel still may do whatever can be done to mend his case. *But if the court and counsel learn of such a claim for the first time after verdict, both are ambushed and nothing can be done except by way of a complete new trial.*

Rule 50(b) permits a party to renew its motion for JMOL after the jury enters a verdict, but "the law is crystal clear" that such a motion may not assert a ground that was not included in the first motion. *Perdoni Bros. v. Concrete Systems, Inc.*, 35 F.3d 1, 3 (1st Cir. 1994); *see also Lambert v. Genesee Hospital*, 10 F.3d 46, 53-54 (2d Cir. 1993), *cert. denied*, 114 S. Ct. 1612 (1994); *Diercks v. Durham*, 959 F.2d 710, 714 (8th Cir. 1992); *Hinojosa v. City of Terrell*, 834 F.2d 1223, 1227-28 (5th Cir. 1988), *cert. denied*, 493 U.S. 822 (1989). For the same reason that "a party may not seek a [JMOL] on grounds not alleged in their motion for directed verdict, a district court may not enter a [JMOL] on grounds not asserted in a party's motion for directed verdict." *Murphy v. City of Long Beach*, 914 F.2d 183, 186 (9th Cir. 1990) (citing *Kutner Buick, Inc. v. American Motors Corp.*, 868 F.2d 614, 617 (3d Cir. 1989)).

Appellate courts are similarly limited in directing entry of judgment. "'[A]ppellate review may be obtained only on the

specific ground stated in the motion for [JMOL].'" *Perdoni Bros.*, 35 F.3d at 4 (quoting *Wells Real Estate, Inc. v. Greater Lowell Bd. of Realtors*, 850 F.2d 803, 810 (1st Cir.), *cert. denied*, 488 U.S. 955 (1988)); *see also Wright & Miller*, *supra*, § 2536, at 333. Thus, if a party fails to move for JMOL in the trial court, the court of appeals has no authority to enter judgment for the verdict loser. *Johnson v. New York, N.H. & H. R.R.*, 344 U.S. 48 (1952); *Cone v. West Virginia Pulp & Paper Co.*, 330 U.S. 212 (1947).

Accordingly, the way in which a party frames the issues in its Rule 50 motions in district court strictly limits the grounds upon which the party can seek the entry of judgment in a court of appeals.[14] Thus, the Federal Circuit was precluded by Rule 50 from granting Lubrizol's JMOL motion on a legal theory that, in Judge Nies' words, came from "out of the blue" because it was not articulated by Lubrizol in its JMOL motions. *See Cone*, 330 U.S. at 217-18; *Sulmeyer v. Coca Cola Co.*, 515 F.2d 835, 846 (5th Cir. 1975), *cert. denied*, 424 U.S. 934 (1976).[15]

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[14] Of course, the Federal Circuit was free to reject the claim construction offered by Exxon, even if it disagreed with Lubrizol, by declaring that the district judge had improperly instructed the jury on this issue. However, such a reversal should result in a remand to the district court for a new trial that gives the parties an opportunity to prove, as well as the jury an opportunity to decide, the case on the basis of proper instructions. *Hunt v. Liberty Lobby*, 720 F.2d 631 (11th Cir. 1983). *See also Pratico v. Portland Terminal Co.*, 783 F.2d 255 (1st Cir. 1985).

[15] Lubrizol presented no evidence that the jury was compelled to accept in support of its theory that it had not infringed Exxon's patent — *e.g.*, the jury could have rejected Lubrizol's argument that the dispersant became non-ashless "in the pot." *See*, *supra*, p. 6, n.2. Moreover, Exxon showed at the earliest possible opportunity, in its petition for rehearing in the court of appeals after receipt of the panel majority's opinion, that it could have introduced additional evidence proving infringement under the panel majority's new theory had it been apprised of that theory at trial by

The lower court's error in granting judgment for Lubrizol on a legal theory not argued in a Rule 50 motion was based on a misunderstanding of *Boyle v. United Technologies Corp.*, 487 U.S. 500 (1988), upon which it decisively relied. *See* App. 10a, 14a.[16] That case rejected Boyle's argument that he was deprived of a jury trial under the Seventh Amendment when the appellate court adopted a version of the government-contractor defense in a product liability action that "differed from the instructions given by the District Court to the jury." 487 U.S. at 513. Boyle's briefs to this Court, like the *Boyle* decision itself, did not even cite Rule 50, nor did Boyle argue that JMOL may not be directed by an appellate court on legal theories that differ from the ones presented in the JMOL motions filed in the district court.[17] Thus, the court of appeals clearly erred in reading this Court's rejection in *Boyle* of a Seventh Amendment argument as a license to disregard the requirements of Rule 50 which preclude entry of judgment on legal or factual claims that were not made in a pre-verdict motion for JMOL.

The Federal Circuit in this case applied its decision in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995), *aff'd*, 64 U.S.L.W. 4263 (April 23, 1996), and asserted the broad power to "independently construe the [patent] claim[s] to determine [their] correct meaning" and then to

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a timely Rule 50(a) motion. (Exxon Rehearing Petn. at 5).

[16] In all of the Federal Circuit cases relied upon by the panel majority, the party prevailing on appeal had asserted in its Rule 50 motions the legal theory subsequently adopted by the appellate court. *See Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533 (Fed. Cir. 1991) and cases discussed at App. 14a.

[17] Similarly, the Fourth Circuit's opinion in *Boyle*, 792 F.2d 413 (4th Cir. 1986), does not discuss Rule 50 nor give any indication that Boyle relied upon Rule 50.

"reverse the judgment below without a remand for a second trial" on a claim construction independently articulated by the Federal Circuit. App. 14a. Moreover, the lower court opined that only "in some cases" would one of the parties offer the "correct claim interpretation," while "[m]ore often" the court would have to do so itself. App. 5a. This indicates that *sua sponte* claim construction in the Federal Circuit without remand to the district court may become the rule, not the exception.

Having affirmed the Federal Circuit's decision in *Markman* that issues of claim construction are to be resolved as issues of law, this Court should grant Question 2 of this petition to ensure that the Federal Circuit does not extend its new claim-construction authority to deprive patent litigants of the opportunity to prove infringement to a properly instructed jury.

CONCLUSION

For the reasons stated above, the petition should be granted.

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